529661

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
15 April 2004 (15.04.2004)

PCT

(10) International Publication Number
WO 2004/031144 A2

(51) International Patent Classification[7]: C07D

(21) International Application Number:
PCT/US2003/030847

(22) International Filing Date:
30 September 2003 (30.09.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/415,182 1 October 2002 (01.10.2002) US

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:
US 60/415,182 (CON)
Filed on 1 October 2002 (01.10.2002)

(71) Applicant *(for all designated States except US)*: **MEDICAL UNIVERSITY OF SOUTH CAROLINA** [US/US]; 171 Ashley Avenue, Charleston, SC 29425 (US).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **ZHOU, Daohong** [US/US]; 319 Plantation View Lane, Mt. Pleasant, SC 29464 (US). **MENG, Amin** [US/US]; ** (**).

(74) Agent: **KRAWZSENEK, Michael, R.**; Fulbright & Jaworski L.L.P., 600 Congress Avenue, Suite 2400, Austin, TX 78701 (US).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2004/031144 A2

(54) Title: USE OF CASPASE INHIBITORS AS THERAPEUTIC AGENT AGAINST RADIATION-INDUCED INJURY

(57) Abstract: The present invention provides methods for the treatment of radiation-induced injury by providing to a subject a caspase inhibitor. The caspase inhibitor may be provided before or after the radiation injury, and further may be provided in combination with a second caspase inhibitor, an anti-apoptotic molecule, a radioprotectant, a cytokine or a growth factor.